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EXAMINER
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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* ANDREW IWAN DE BEER and STUART JOHN CAMPBELL

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Appeal 2016-000120  
Application 12/593,747<sup>1</sup>  
Technology Center 1600

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Before ELIZABETH A. LAVIER, TAWEN CHANG, and  
RACHEL H. TOWNSEND, *Administrative Patent Judges*.

LAVIER, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellants seek reversal of the Examiner's rejection of claims 14, 16–18, 22, 23, 25–27, 34, 35, 37, and 40. We have jurisdiction under 35 U.S.C. § 6(b). For the reasons set forth below, we AFFIRM.

BACKGROUND

The Specification describes cosmetic compositions comprising an aluminum salt, and methods for preparing the same. Spec. 1. The

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<sup>1</sup> Appellants state the real party in interest is Colgate-Palmolive Europe SARL. Br. 2.

Specification notes that agglomeration of aluminum salt particles can be problematic in spray formulations such as aerosols, where the outlets from the container are small. *See id.* Thus, the Specification aims to provide novel compositions “with good flowing properties.” *Id.*

Claim 14, the only pending independent claim, is illustrative:

14. An aerosol antiperspirant comprising: an at least partially dehydrated aluminum sulfate salt, silicone oil present in an amount of at least 70 weight % of a total weight of liquids and solids, and an aerosol propellant, and wherein at least 95 vol% of the aluminum sulfate salt is present in the form of particles having a size of less than 50  $\mu\text{m}$ , and wherein the water of hydration content of the salt is 90 mole %, or less, of the fully saturated water of hydration content.

Br. 7 (Claims Appendix).

#### REJECTION MAINTAINED ON APPEAL

Claims 14, 16–18, 22, 23, 25–27, 34, 35, 37, and 40 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Nakane,<sup>2</sup> Salas,<sup>3</sup> Wahl,<sup>4</sup> Goldberg,<sup>5</sup> and Brewster.<sup>6</sup> Ans. 2.

#### DISCUSSION

The Examiner relies on Nakane to teach or suggest much of the claimed subject matter. *See* Final Action 4–5; Ans. 2–3. Nakane generally discloses “[a] skin treatment composition comprising anti-bacterial zeolite and alum and/or dried alum.” Nakane Abstract. The Examiner points to

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<sup>2</sup> Nakane et al., US 2006/0099161 A1, published May 11, 2006.

<sup>3</sup> Salas et al., 5,945,085, issued Aug. 31, 1999.

<sup>4</sup> Wahl, 3,725,540, issued Apr. 3, 1973.

<sup>5</sup> Goldberg et al., 5,176,903, issued Jan. 5, 1993.

<sup>6</sup> Brewster, 5,922,309, issued July 13, 1999.

Example 2-16 of Nakane (*see* Ans. 2–3), which discloses a deodorizing spray comprising dried alum with an average particle size of 4.5  $\mu\text{m}$ , and dimethyl polysiloxane as the silicone oil (Nakane ¶ 208 (Example 2-16)).

Among other things, the Examiner finds:

Because the alum is dried, the examiner concludes that the water hydration content falls within the ranges found in instant claims 14 and 16–17. The examiner calculates that the amounts of solid and liquid components in the deodorizing spray (paragraph 206) is 9.0. Dimethylpolysiloxane constitutes a silicone oil. The percentage of dimethylpolysiloxane is 56% ( $5.0/9.0 \times 100 = 56\%$ ) which is close to the range found in instant claim 14.

Ans. 3.

As to illustrative claim 14, the Examiner finds that Nakane fails to expressly disclose two aspects: (1) “silicone oil present in an amount of at least 70 weight % of a total weight of liquids and solids,” and (2) “at least 95 vol% of the aluminum sulfate salt is present in the form of particles having a size of less than 50  $\mu\text{m}$ .” *See* Ans. 4–5.

For the silicone oil, the Examiner finds that Nakane’s 56% is “close to, albeit lower than, the range of instant claims 14 and 37.” Ans. 4. For additional support, however, the Examiner turns to Goldberg, which teaches an antiperspirant/deodorant composition that may take many compositional forms, including aerosol, but provides details for a preferred roll-on composition including silicones in the amount of 10–70% cyclomethicone and 1–10% dimethicone. *See* Ans. 4 (discussing Goldberg 6:17–26). The Examiner also cites Brewster, which teaches an underarm treatment composition that may be an aerosol but is preferably a cream. *See* Ans. 5; Brewster 4:46–48. Brewster’s compositions include a cyclomethicone

hexamer, present in amounts from 5–80% by weight, but optimally from 30–50% by weight. Brewster 3:23–27; *see also* Ans. 5.

For the 95% of aluminum sulfate salt in particles of less than 50  $\mu\text{m}$ , the Examiner relies on Salas and Wahl. *See* Ans. 5–6. Salas, which discloses aerosol deodorant/antiperspirant compositions (Salas Abstract), teaches that “[s]uperior wetness reduction properties are obtained if part or all of the antiperspirant ingredient is in the form of particles which have a diameter of less than about 15 microns” (*id.* at 3:41–44). Salas includes aluminum sulfate among its list of suitable astringent compounds. *Id.* at 3:51–55. Wahl also teaches aerosol antiperspirant compositions (*see* Wahl Abstract) using “any of those [antiperspirant compounds] well known in the art that are insoluble in the aerosol composition as a whole” (*id.* at 1:55–57). Wahl describes the importance of uniform, small particle sizes to keeping the particles suspended in the composition, avoiding clogging the valve of the aerosol container, and for adequate dispersal on the skin (*see id.* at 2:28–39). Wahl prefers particles ranging from 10–26  $\mu\text{m}$ . *Id.* at 2:46–47.

The Examiner finds it would have been obvious to combine the references as claimed, starting with Nakane. *See* Ans. 6–7. For the silicone oil, the Examiner finds that Nakane teaches ring polysiloxanes (*see id.* at 6 (citing Nakane ¶ 112)) in an amount “close to” the claimed range (*id.* at 3 (discussing Nakane ¶ 206)), while Goldberg and Brewster teach cyclomethicone in amounts that overlap with the claimed range and render them *prima facie* obvious (*id.* at 7). The Examiner also finds that increasing the amount of silicone oil from that taught in Nakane would have been a matter of routine optimization. *See id.* at 12. Indeed, the Specification states that silicone oils can be used as carrier liquids (*see* Spec. 4), and that the

concentration thereof “may be chosen within a wide range” depending on the purpose and application form (*id.* at 5), anywhere from “at least 25 wt%” to “up to 99.5 wt%” (*id.* at 5–6), although “at least 80 wt%” is particularly preferred (*id.* at 5).

For the aluminum sulfate particles, the Examiner notes that Nakane “already teach[es] aerosol antiperspirant compositions comprising aluminum sulfate with a particle size of 4.5 microns,” which is more than 10 times smaller than the 50 micron limit recited in claim 14. Ans. 7. Accordingly, the Examiner finds that “one would reasonably expect that the aluminum sulfate particles of Nakane et al. have a particle size distribution which lies within or is at least close to the instantly claimed range,” especially in view of the teachings in Salas and Wahl regarding the importance of particle size uniformity. *Id.*

Appellants fail to persuade us of any reversible error by the Examiner. Several of Appellants’ arguments unpersuasively attack the references individually rather than the combination. *See In re Keller*, 642 F.2d 413, 426 (CCPA 1981). For example, Appellants assert that “Brewster ’309 does not disclose alum or the selection of the particle size and level of hydration.” Br. 3. This is unpersuasive, as the Examiner relies on Brewster for a different claim element, namely cyclomethicone hexamer (a silicone oil) at 5–80% by weight of the deodorant/antiperspirant composition. Ans. 5 (citing Brewster 3:25–27).

Further, Appellants critique the Examiner’s use of references directed toward non-aerosol antiperspirant compositions, arguing that formulations of sticks and roll-ons, for example, fail to “provide direction to one of ordinary skill in the art to make selections for an aerosol composition.” Br. 3. The

Examiner acknowledges that roll-on compositions are different from aerosols, as the former lacks the propellants found in aerosols, but finds that otherwise, “roll-on and aerosol compositions are similar liquid compositions.” Ans. 11. We discern no error in this analysis. *Cf. Wyers v. Master Lock Co.*, 616 F.3d 1231, 1238 (Fed. Cir. 2010) (noting the scope of analogous art should be construed broadly).

Regarding the amount of silicone oils specifically, Appellants assert that the lower-than-claimed amounts taught in Nakane, Salas, and Wahl teach away from the higher claimed range. *See* Br. 4–5. But teaching *another* way is not the same as teaching away. *See DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1327 (Fed. Cir. 2009) (“A reference does not teach away, however, if it merely expresses a general preference for an alternative invention but does not ‘criticize, discredit, or otherwise discourage’ investigation into the invention claimed.” (quoting *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004))); *see also Merck & Co. v. Biocraft Labs., Inc.*, 874 F.2d 804, 807 (Fed. Cir. 1989) (observing that when considering § 103, the prior art must be considered for all of its teachings, including unpreferred embodiments). We agree with the Examiner (*see* Ans. 12) that the lower concentrations of silicone oils in Nakane, Salas, and Wahl do not teach away from the claimed invention.

As to the claimed combination, Appellants argue that “[t]oo much picking and choosing is required from among all the variables found in these references” to achieve the claimed invention. Br. 5. Similarly, Appellants reject the Examiner’s optimization analysis as unfounded. *See id.* We are not persuaded. As an initial matter, “picking and choosing” can be appropriate in an obviousness rejection. *See In re Arkley*, 455 F.2d 586, 587

(CCPA 1972) (observing that “picking and choosing may be entirely proper in the making of a 103, obviousness rejection,” unlike in an anticipation rejection); *see also KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007) (“A person of ordinary skill is also a person of ordinary creativity, not an automaton.”). The Examiner’s rejection of claim 14 relies largely on Nakane; the only modifications are increasing the amount of silicone oil (to 70 weight %) and ensuring uniformity and size of aluminum sulfate salt particles (at least 95 vol% of particles less than 50  $\mu\text{m}$ ). *See* Ans. 4–5. And as explained above, Nakane discloses an amount of silicone oil (56 weight %) close to the claimed amount and also teaches an alum average particle size (4.5  $\mu\text{m}$ ) significantly less than 50  $\mu\text{m}$ , while the other references provide additional direction for formulating antiperspirant/deodorant compositions. For example, Goldberg and Brewster both provide reasons for using their silicone oils, which would have provided a rationale to the ordinarily skilled artisan to pursue silicone oil levels within the ranges disclosed in Goldberg and Brewster. Namely, Goldberg states that “[t]he silicone components provides [sic] a pleasant layer on the skin which enhances feel.” Goldberg 4:47–49. Brewster, on the other hand, focuses on solving the problem of white residue left by many underarm products (*see* Goldberg 1:31–38) by using “predominantly hexameric cyclomethicone,” to the partial exclusion of tetramer and pentamer forms (*id.* at 1:57–61). Thus, we find that this is not a case of too much “picking and choosing,” so much as one of modest, obvious modification of the prior art. *Cf. KSR*, 550 U.S. at 420 (“[I]n many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle.”).



For these reasons and those of record, we are unpersuaded by Appellants' arguments, and we affirm the Examiner's rejection of claim 14.

As to claims 16, 17 and 40, Appellants' "separate[]" arguments regarding these claims amount to restating the additional limitations of these claims and stating that the references fail to teach or suggest the claimed combination "without the need for picking and choosing from among all of the variables." Br. 5–6. Accordingly, these arguments are not substantively different from those made in regard to claim 14. For similar reasons as discussed above with regard to claim 14, we do not find Appellants' "picking and choosing" arguments persuasive for claims 16, 17, or 40. We affirm the Examiner's rejection of claims 16, 17, and 40.

Claims 18, 22, 23, 25–27, 34, 35, and 37, which are not argued separately, fall with claim 14.

### CONCLUSION

The rejection of claims 14, 16–18, 22, 23, 25–27, 34, 35, 37, and 40 is affirmed for the reasons of record and as explained herein.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED